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**DEVELOPMENT OF AN OUTREACH PROGRAM FOR NASA:  
"NASA AMBASSADORS"**

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## **INTRODUCTION AND BACKGROUND**

For the last two decades United States government and business institutions have been scrambling to recapture "marketshare" lost to other countries (mostly to Japan). They have instituted new "ways of doing business" such as "Total Quality Management", "Continuous Improvement" and "ISO 9000", all of which find some elements in the economic theories proposed after World War II by Dr. Duane Deming. Among the concepts which he proposed we find requirements that we "determine who our customers are" and "be sure that we are satisfying our customers". Government agencies have adopted elements of the above policies but they have found that it is easier to enunciate a policy than it is to implement it. In order to reach out to its customers NASA has introduced a policy that requires each mission to set aside a fraction of its budget to do "education and outreach". However, while NASA does have an office of education that is responsible to disseminate NASA information to the school systems, and an office of Public Affairs that reaches the general public through the media, there is no one NASA office that is responsible to reach directly and personally to the general public. The "NASA Ambassadors" program is designed to do just that.

During the summer of 1996 Dr. Malcolm McDonald and I, under the guidance of Dr. Frank Six, initiated the development of the program labeled "NASA Ambassadors". Pre-packaged presentations consisting of visual and textual materials describing NASA's science and missions were assembled and made available to members of MSFC's summer programs. The intent was that those who requested copies of a given talk would give it to general audiences in their hometowns during the following year. Four presentations were prepared but not and applications to receive them were completed by forty members of the MSFC summer programs. The topics of the completed packages, those under development and new talks under consideration are described in the final report of Dr. Malcolm McDonald who has also prepared a NASA SFFP report for the summer of 1997.

## **THE NEED FOR THE PROGRAM**

It is widely recognized by NASA's publicists that NASA needs to do a better job of advertising. However, since NASA is a government agency, it cannot actively advertise in the commercial media, as a business, would but instead has to rely on other forms of communications to reach out to its customers: the voters and taxpayers. Currently NASA's outreach is accomplished primarily through its office of education. Educational institutions offer a well established infrastructure which can be used to "tell NASA's story". However, the educators are not talking to NASA's customers but to their children. In fact teachers, whether they teach at the K-12 level or at the college or university level, rarely venture outside of their own institutions to make presentations. It is this separation that gives rise to the idea of the "Ivory Tower" which the teachers, especially those at the post secondary education level, rarely leave.

Major colleges and universities are recognizing this isolation from the general public (more exactly, from their alumni) and are setting up speakers bureaus to reach out, not to educate, but to raise funds. The NASA Ambassador Program provides a speakers bureau using members of MSFC summer programs, not to raise funds, but to reach out to the general public to convey the excitement of NASA's activities and to enlist support for its programs. There are several advantages to using summer programs' participants:

1. They are generally good communicators (teachers).
2. They are available at no cost. They require no honoraria nor travel funds.
3. They are creditable speakers. They do not receive NASA salaries so their enthusiasm for their topics is free of any self-serving agenda.

Dr. Neal Lane, director of the National Science Foundation, recently wrote a letter to the presidents of the country's major universities calling for them to support him as "we strive together to communicate the role that research plays in our nation's present and future". In a recent address to university public affairs professionals he proclaimed;

"We are enjoying a golden age of discovery, as exciting research continues to uncover new knowledge about our universe. However, a different kind of golden age - - that of ever increasing funding for American science and engineering - - is clearly over....."

Today, public support must be earned. We can no longer expect it in the form of a blank check and an undefined agenda. This is entirely appropriate. At the same time, I remain very concerned that the nation will not be doing enough to maintain and strengthen its position as a world leader in science and engineering over the next several years.

It is now more vital than ever for us, the research community, to make a convincing case to the public about the tangible societal benefits that flow from science and technology, and the importance of investing adequately in research and education.

At the National Science Foundation, our surveys continue to show that more than two-thirds of the public believes that science is a net good. But the vast majority of people have no understanding of the scientific process; 98% of them don't know what research means. This gap should trouble all of us.

It is also troubling that many scientists and engineers, while concerned, do not think they can do anything about the gap. This may be because traditional scientific education does not prepare its graduates very well to assume a role as an activist in society, an **ambassador for science** (my emphasis).

I well understand the discomfort, from my own career experience. But during my years as director of NSF, I've come to understand the need for the research community to reach out to the public. In more personal terms, we need to engage in genuine public dialogues with our local communities, in the mold of what I call the 'civic scientist'.....

It is true that the climate for science has changed forever. But change brings opportunity. If the sobering budget outlook prompts us all to communicate more broadly, more frequently and more effectively, then we have learned an important and necessary lesson that will serve the science and engineering community well in any climate."

## **OPERATIONAL DETAILS**

In Dr. McDonald's final report (pages XXXII-1 to XXXII-4) he outlines five task areas: preparation of new presentations, updating of existing presentations, recruitment of NASA Ambassadors, production, and operations. Many of these tasks can be accomplished during the summer. The following is a description of procedures that need to occur during the rest of the year (end of summer until the beginning of the next summer) when the summer faculty and teacher program participants are not at the Marshall Space Flight Center. These represent details that would have to be managed either by the Office In Charge of the program or by some other contracting group.

The procedural details listed below are associated with the areas of: a) the production phase of newly-written talks, b) the production phase of updating the "boilerplate" materials which are integrated into each NASA AMBASSADOR (NA) talk, c) the production phase related to the updating of previously existing talks, and d) the general management operations of the program.

### **I. The Production of New Presentations.**

(This assumes that new presentations (have) been developed by the end of the summer through the efforts of the summer participant volunteers.)

1. Has the talk been reviewed by a NASA Technical Expert (NTX) for accuracy (YES or NO)? (It is expected that this will already have occurred during the summer writing.)
2. **If "NO"**, the text and visual materials are delivered to the NTX for approval.
3. The materials must be retrieved from the NTX after review.
4. **If "YES"**, the Office In Charge (OIC) authorizes the reproduction of the new talk. This involves determining the number of copies to be reproduced and handling the paperwork for the necessary work order.
5. The "raw" visual materials must be delivered to the photo lab for reproduction.
6. The "raw" textual material must be delivered to the reproduction department.
7. The textual and visual copies must be retrieved from the respective locations.
8. The presentation packages must be assembled:
  - a) Number the 35-mm slides individually in sequential order.
  - b) Acquire the necessary vinyl slide holders.
  - c) Insert the slides into the slide holder pockets. (This will include the "boilerplate" slides and the talk subject slides.)
  - d) Collate and staple the text pages (if not already done).
  - e) Prepare the envelopes with the slide sets, the textual materials, a "welcoming letter" which explains the candidacy aspects of the NA program, and instructions for the use of the presentation package.

9. Delivery of the ready-to-mail envelopes to the Teacher Resource Center (TRC) for storage and eventual distribution.
10. The OIC directs the TRC to mail or distribute the presentation packages.

## **II. The Review/Updating of "Boilerplate" Materials.**

1. Is the boilerplate material still up-to-date with regard to content (YES or NO)?
2. **If "NO"**, the OIC needs to review and bring the materials up to date.
3. **If "YES"**, the OIC determines the reproduction needs of the material and processes the necessary work order(s) to the photo lab and the textual reproduction facility.
4. Repeat steps 5, 6, 7, and 8 in the procedure above.

## **III. The Updating of Existing Presentations.**

1. Does an existing presentation require updating (YES or NO)? Refer to an appropriate NTX to determine the answer. This determination will have been handled during the summer while the summer programs participant volunteers are involved.
2. **If "YES"**, the summer volunteers and the NTX will make the necessary changes. This procedure will create new update materials which must be incorporated with existing talks on that topic.
3. The OIC must certify the reproduction needs for the update materials and proceed with the reproduction steps 4 - 7, in I.
4. The assembling of update "kits":
  - a) Compose step-by-step instructions for integrating the update kits into the existing talks.
  - b) Number and insert the update slides into vinyl holders in the update kits.
  - c) Insert the updated text into the update kits.
  - d) Deliver the update kits to the TRC.
  - e) The OIC issues orders for mailing update kits to affected NA's.
5. The update kit materials must be integrated into the previously-existing inventory of packages on that presentation topic at the TRC.
6. **If "NO"**, no action is required.

## **IV. General Operations.**

1. The OIC must make available a point of contact (person and phone number) to respond to NA inquiries and requests.
2. Evaluations:
  - a) Evaluate whether any of the presentation topics should not be supported (dropped from the system). (This decision will be made during the summer by the summer volunteers and coordinators in consultation with a NTX.)
  - b) Evaluate the feedback information available in the Public Affairs Office NA database concerning the performance and presentation style of active NA's. (It is hoped that this function will be handled as a project by the NASA Alumni League (NAL) members.)

3. The 2(b) evaluation will entail gathering the available feedback information from the PAO database and determining individualized helpful criticisms and comments that should be sent to the NA's. The results will be furnished to the OIC.
4. The OIC is responsible for communicating the results of the evaluations to the NA's.
5. The maintenance of the NA feedback database is the responsibility of the PAO. For each presentation made by a NA the following steps should occur:
  - a) The NA returns a postcard feedback form listing simple facts and statistics for the talk,
  - b) The program chairperson of the organization to which the talk is presented returns members' evaluation forms.
  - c) The PAO database manager logs the receipt of the various forms and passes them on to the OIC.
  - d) The OIC stores the forms until the evaluation of the forms is done (by the NAL).
6. The NA database should contain information including: each NA's name, address, and affiliated institution, presentation topics in the NA's possession, and the statistics related to each talk delivered (*e.g.*, date, group hearing the presentation, presentation topic, number in attendance, and the number of returned evaluation forms, *etc.*).

## CONCLUSION

The NASA Ambassadors Program is designed to present the excitement and importance of NASA's programs to its customers, the general public. Those customers, which are identified in the "Science Communications Strategy" developed by the Space Sciences Laboratory at the MSFC, are divided into three categories:

1. Not interested and not knowledgeable
2. Interested but not knowledgeable
3. Science attentive.

In it they recognize that it makes the most sense to attempt to communicate with those described in the last two categories. However, their plan suggests that the media and the educational institutions are the only means of outreach. The NASA Ambassadors Program allows NASA to reach its target audience directly.

Steps to be taken in order for the program to commence:

1. MSFC chooses to support the NASA Ambassadors Program. - **decision point**
2. Designate an "Office In Charge".
3. Assign the "Operation" phase to in-house MSFC personnel or to a contractor. - **decision point**
4. Name a point of contact.
5. Identify partners in the program and enlist their assistance.
6. Process an unsolicited proposal from an outside source to accomplish those tasks which MSFC chooses to out-source.

